



**WHY YOU NEED TO
GET IN THE
ROOTZONE**





GET IN THE ROOTZONE

IT'S A SCIENCE... AND AN ART.

AstroTurf®s patented RootZone® is a layer of texturized fiber that curls down to roughly the height of the infill. The crimped fibers form a net-like matrix that encapsulates the infill and holds it in place, reducing infill splash and migration. Infill stability provides:

- **More consistent footing**
- **Enhanced cleat release**
- **More uniform shock absorption**
- **Better field resistance to wear**

AstroTurf invented the first RootZone back in 1998. It involved texturizing a fiber to form it into a shape and giving it a memory to maintain that shape throughout its life.

The process is more complicated than it sounds.

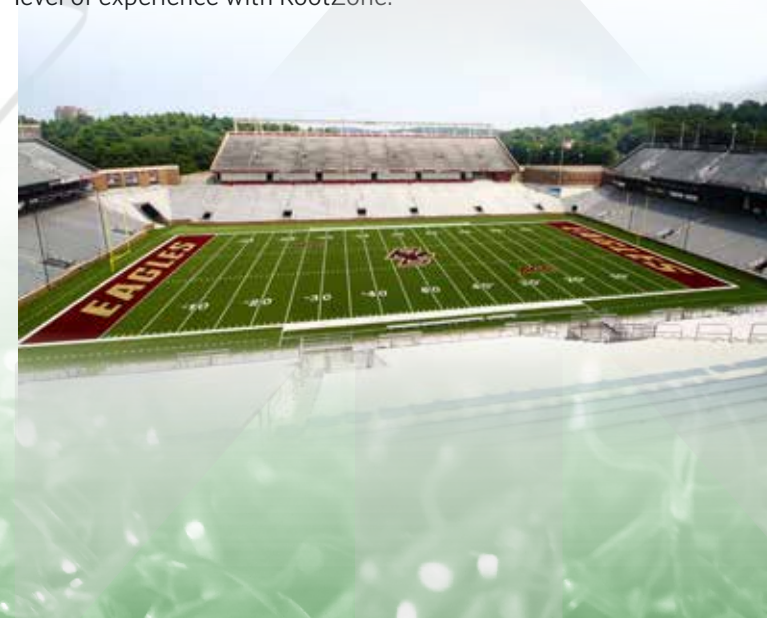
Each individual batch of RootZone fiber is run through a series of proprietary texturizing processes. However, texturizing it is dependent upon a number of other factors. These include managing the delicate balance of temperature, humidity, pressure and time. Each time a RootZone fiber goes into manufacturing, once it exits the basic fiber processes, the artists take over.

AstroTurf experts are artists in bringing their decades of experience and millions of square feet to play in selecting only the 'perfect batch' of texturized fiber for use in RootZone turf systems.

THE ART OF THATCH

Optimal texturization is vital, ensuring that the fibers draw down to the exact height. (If the RootZone fibers are too tight, it's difficult to get the infill in, and if the RootZone fibers are too loose, they won't do their job of holding the infill in place!) During and after each process, the individual fiber batches are carefully measured. This individual measurement determines which batch becomes a fiber used for pets or landscape, tennis or field hockey, or many other turf manufacturing programs.

No other manufacturer follows this process. And although many claim to have "thatch" type products that they introduced to follow our lead, they aren't even close. AstroTurf has manufactured and installed more than 50,000,000 square feet of RootZone athletic fields over the last decade. No one else has this level of experience with RootZone.



SPORTGROUP

SportGroup is today's true global sports surfacing giant, with manufacturing facilities around the world. Active in over 70 countries, SportGroup has installed more than 13,000 artificial turf fields and 16,000 running tracks. SportGroup was created by selective acquisitions of the leading turf, track, indoor and outdoor sports surface manufacturers.

This amalgamation of innovation and technology also includes the manufacturers and marketers of key raw materials used in all aspects of the sports surfacing industry.

AstroTurf is now in the enviable position of enjoying a completely vertical and fully integrated environment, where all of its ideas can be brought to life in a market hungry for innovation.

Welcome to the next generation.
The second half of the AstroTurf century.





GET YOUR MONEY'S WORTH

Fiber is the most expensive part of any field. Infill materials like sand and rubber are the least expensive parts of your field. It's the fiber that's the beef in your burger.

Although many claim that heavy infill systems are better, they are simply less expensive to produce. Studies have not proven them to be any safer or better. In fact some studies show the opposite.

Artificial turf fields are expensive. No doubt about it. So make sure you get your money's worth.

GET THE PRODUCT THAT YOU'RE PAYING FOR, NOT JUST THE MARKETING SPIN.



WHY PAY A LOT ...IF YOU'RE ONLY GETTING A LITTLE?

COMMODITY HEAVY INFILL SYSTEM 2"



Polyethylene - 36 oz per sq yd



Cryogenic Rubber - 2.6 lbs per sq ft



Sand - 3.65 lbs per sq ft

ASTROTURF 3D ROOTZONE 2"



Polyethylene - 42.6 oz per sq yd



Nylon - 17.4 oz per sq yd



Ambient Rubber - 2.35 lbs per sq ft



Sand - 2.35 lbs per sq ft

	HEAVY INFILL SYSTEM	ASTROTURF
Fiber	.55	1.04
Rubber	.55	.40
Sand	.23	.15
TOTAL	\$1.33	\$1.59

HEAVY INFILL SYSTEM 2"
\$1.33 per sq ft
ASTROTURF 3D ROOTZONE 2"
\$1.59 per sq ft
DIFFERENCE
\$1.59 - \$1.33 = .26 x 80,000 sq ft = \$20,800

If heavy infill systems cost \$20,800 less... why do they sell for the same price - or higher than AstroTurf?

The difference between a heavy infill and a heavy fiber system is \$0.26 per sq ft. It may not sound like a lot, but it represents over \$20,000 on a typical field!

Profit is profit, but maybe the competition should think more about their customers than about their bottom line.

ROOTZONE

KEEP YOUR INFILL WHERE IT'S SUPPOSED TO BE.

Our patented RootZone is like a powerful turf web, that entangles the infill and keeps it where it's supposed to be. It reduces splash during play and more infill stays in place than conventional systems. ASTM testing proves that wherever infill moves there is a big difference in GMAX.

RootZone is a unique enhancement to artificial turf. It improves player security by delivering more predictable footing and more uniform shock absorption and energy restitution than conventional turf systems provide.

MORE SPLASH

COMPETITION



LESS SPLASH

ASTROTURF ROOTZONE



INFILL MIGRATION

With RootZone your infill stays in place to provide an "as built" system even long after your field is installed. That means everything when it comes to performance, safety, maintenance costs and long term durability.



SPIN TEST

A 1' x 1' sample is spun on its axis for one minute.

AstroTurf RootZone 3D
Lost 19.3% of starting infill



Competition
Lost 75.4% of starting infill





IMPROVE PLAYER SAFETY

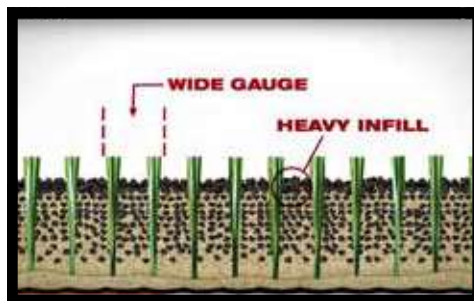
An independently funded study by Michigan State found that the RootZone significantly reduced torque transmitted to knees and ankles, at levels similar to natural grass. Conversely, an independent study by the NFL showed that heavy weight infill systems yielded 67% more ACL injuries and 31% more high ankle sprains than natural grass.

Conventional infilled turf fields exhibit constant infill migration which leaves empty holes, divots, and dangerous spots if not carefully maintained.

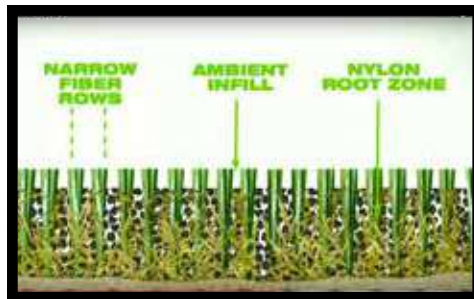
As a result, in those high use areas, players are left with less shock absorption to prevent concussions and other injuries.



COMPETITION



AstroTurf 3D RootZone



ANALYSIS, QUOTES, STUDIES.

Proceedings of the Institution of Mechanical Engineers,
Part P: Journal of Sports Engineering and Technology

The effects of various infills, fibre structures, and shoe designs on generating rotational traction on an artificial surface.

- M R Villwock, E G Meyer, J W Powell, A J Fouty, R C Haut

"An artificial surface with a nylon root zone yielded significantly lower peak torques than similar fibre surfaces without a nylon root zone."

"The cryogenically processed SBR infill yielded significantly higher peak torques than the ambient ground SBR. The size of infill particles and the presence of a nylon root zone may influence the compactness of the infill layer."

"Injuries to the lower extremity are among the most frequent injuries for all levels of sports, and often account for more than 50% of reported injuries."

"A nylon root zone is a simulated thatch layer at the base of the tufted turf. The zone provides fibre support and reduces infill compaction."

"Monofilament polyethylene fibres in conjunction with a nylon root zone produced significantly lower peak torques than other fibre types."

"Peak torques were significantly affected by infill type. The differences in torque may be due to the fineness of the infill, which is determined by the manufacturing process. A finer particle, such as cryogenically processed SBR crumb infill may develop a relatively compacted structure of infill that leads to more cleat contact and greater rotational traction."

The American Journal of Sports Medicine



An Analysis of Specific Lower Extremity Injury Rates on Grass and FieldTurf Playing Surfaces in National Football League Games

Safety Panel Investigation performed at the National Football League Injury and Safety Panel, NFL, New York, New York.

- Elliott B. Hershman, MD*, Robert Anderson, MD, John A. Bergfeld, MD, James P. Bradley, MD, Michael J. Coughlin, MD, Robert J. Johnson, MD, Kurt P. Spindler, MD, Edward Wojtys, MD, John W. Powell, PhD, ATC, for the National Football League Injury and Safety Panel

"Specifically, the observed injury rates of ACL sprains and eversion ankle sprains on FieldTurf surfaces were 67% and 31% higher than on grass surfaces and were statistically significant."



Michigan State Study - Funded by NFL Charities

"If the rotational traction characteristics of natural grass are the gold standard upon which artificial surfaces should be compared... the artificial surface constructed with polyethylene fibres in conjunction with a nylon root zone and ambient ground SBR crumb infill generated a lower peak torque."



Orthopedic Society for Sports Medicine

"More than 70% of ACL injuries occur without contact. Non-contact injuries happen during landing or a sharp cutting maneuver."

"Lower extremity injuries account for 50% of all sports injuries."



REDUCE MAINTENANCE COSTS

Every infilled turf field requires maintenance. Most of the money budgeted for equipment and grooming of conventional infill turf fields is spent to replace infill that has migrated out of position.

**With RootZone your infill stays put.
And so do your maintenance crews.**

Also, every time your crew is out brushing and grooming your field, they are actually wearing out the fibers. The more your infill moves, the more grooming you have to perform. That means more wear and tear on your fibers.

With RootZone the benefits are obvious. You reduce maintenance costs, while your field lasts longer and looks better.

GET MORE LIFE OUT OF YOUR FIELD

Over time, conventional polyethylene fibers will lay over and break down from harmful UV rays. It's a fact of life. But not so with a RootZone system.

It has more fiber to begin with. Lots more. Plus the RootZone includes a nylon material made exclusively by AstroTurf. It is 10 times more durable than polyethylene fibers. Because the nylon RootZone won't break down, even years later, your field will continue to look and play like just like it did when you installed it.

Conventional fields may survive their warranty, but they end up looking like a field of black rubber and play nothing like they did when new. It is in years 5-8 when RootZone really stands out from the crowd, providing a far more consistent playing surface and far better looking field.



Whittsett Park - Los Angeles, CA
Competitor's Field - 10 Years Old



Ted Hendricks Stadium - Miami, FL
AstroTurf RootZone 3D - 10 Years Old





FOOTBALL INSTALLATIONS

WHAT THEY'RE SAYING!

"It was a fast surface out there. It's a little different than our turf at our school. It felt a little more grassy-feeling and I liked playing on it. It was a fast surface and allowed us to perform well."

– **Wide Receiver**, California State Football Championships, playing on AstroTurf

"We have been extremely pleased with AstroTurf and its RootZone 3D system after a year of playing on the surface."

– **Sean Snyder**, Associate Head Coach and Director of Football Operations, Kansas State University

"The innovative technology behind their (RootZone) product combined with the integrity of the company and their people made the decision an easy one for our staff here at Rice."

– **David Bailiff**, Rice University Head Football Coach

"This turf revitalizes the look at our stadium. And, most importantly, addresses safety needs of student-athletes."

– **Jed Stugart**, Head Football Coach, University of Sioux Falls

"This is an exciting time for Boston College, and we feel that our new facilities will propel our athletic program well into the next decade. It makes sense that we would enlist AstroTurf to help us realize this vision. The technology behind their RootZone products is unrivaled in the market, and over the course of our relationship with AstroTurf we've seen that their commitment to client satisfaction is second to none."

– **Matt Conway**, Associate AD of Facilities and Operations, Boston College

"In football, as in life, you want to give your kids every opportunity to succeed. On the gridiron, that starts with the actual playing field. We chose AstroTurf RootZone 3D Decade because the technology and design were head and shoulders above the competition."

– **Joe Prud'homme**, Nolan Catholic Head Coach (Dallas, TX)

"The technology behind our new AstroTurf RootZone 3D field gives us the confidence to know that D.W. Rutledge Stadium can stand up to frequent use and still look and perform great under the Friday night lights."

– **Mike Miller**, AD, Judson ISD, TX

"Safety was a key component in the decision-making process. We were impressed with the technology and peer testimonials of the AstroTurf 3D systems, especially as they related to player protection."

– **Gail Pinsker**, William S. Hart Union High School District Spokesperson, Valencia, CA

- ◆ Alabama State University
- ◆ Alamodome
- ◆ Boston College
- ◆ Brigham Young University
- ◆ Bristol Motor Speedway
- ◆ Camping World Stadium (Citrus Bowl)
- ◆ Georgia State University
- ◆ Hampton University
- ◆ Jacksonville University
- ◆ Kansas State University
- ◆ Kent State University
- ◆ Liberty University
- ◆ Mercer University
- ◆ Michigan State University
- ◆ Mississippi State University
- ◆ Nicholls State University
- ◆ North Dakota State University
- ◆ Ohio University
- ◆ Oklahoma State University
- ◆ Old Dominion University
- ◆ Rice University
- ◆ Sam Houston State University
- ◆ South Dakota State University
- ◆ Stanford University
- ◆ Town of Memphis (Liberty Bowl)
- ◆ University of Cincinnati
- ◆ University of Delaware
- ◆ University of Massachusetts - Amherst
- ◆ University of North Dakota
- ◆ University of Oklahoma
- ◆ University of South Alabama
- ◆ University of South Carolina
- ◆ University of Southern California
- ◆ University of Tennessee
- ◆ University of Tennessee at Chattanooga
- ◆ Utah State University



Boston College - Chestnut Hill, MA



University of South Carolina - Columbia, SC



Bristol Motor Speedway - Bristol, TN



Oklahoma State University - Stillwater, OK



Kansas State University - Manhattan, KS



Michigan State University - East Lansing, MI



SOCCER INSTALLATIONS

WHAT THEY'RE SAYING!

"The technology behind their RootZone products is impressive, and the emphasis on player protection and safety was paramount in our decision-making process."

– **Michael Thomas**, Director of Athletics, Boys' Latin School, MD

"AstroTurf received rave reviews from our coaches. There were certainly other factors that were very important, including safety and sustainability."

– **Greg Cappell**, Associate AD, Colorado College

"We made a conscientious decision to go with AstroTurf for all three fields comprising the athletic campus improvement plan. The technology behind the 3D product, specifically the root zone, was a contributing factor in choosing AstroTurf."

– **Rob Harper**, DePauw University Facilities Management

"After an exhaustive eight month review process, we chose AstroTurf. The technology and testimonials behind AstroTurf's next generation synthetic turf systems left no doubt in our minds – the RootZone 3D FIFA product was the right fit for Evergreen SportsPlex."

– **Chris Bourassa**, Head of Operations, EverGreen SportsPlex, Leesburg, VA

"The previous installations have been a tremendous success. Not only are they a great company to work with, but the technology and sport-specific engineering of the AstroTurf RootZone product line is without peer."

– **Jeff Barber**, AD, Liberty University (owner of 9 AstroTurf fields)

"The decision to go with AstroTurf was unanimous. We felt that the quality of their RootZone product, the technology behind it, and the experience of their team were unrivaled among synthetic turf companies."

– **Mike Werner**, Mayor of Gatlinburg, TN
(Home of Rocky Top Sports World)

"It did not go unnoticed that our last AstroTurf fields gave us over ten years of great performance under very challenging conditions. When it finally came time to replace them, we knew we wanted AstroTurf's RootZone 3DSF turf system. AstroTurf synthetic surfaces are well-engineered and their product has an excellent track record on our flood-prone and heavily used facility."

– **Mike Rottjakob**, Executive Director of the Asheville Buncomb Youth Soccer Association

"AstroTurf is the inventor of the entire synthetic turf industry. Our new fields will feature AstroTurf's RootZone technology which provides structure and consistency."

– **Lynn Berling Manuel**, CEO - United Soccer Coaches (formerly NSCAA)

- ◆ Azusa Pacific University
- ◆ Boston College
- ◆ Brigham Young University
- ◆ Camping World Stadium
- ◆ Citrus Bowl Stadium
- ◆ Davis & Elkins College
- ◆ Duke University
- ◆ Evergreen SportsPlex
- ◆ Forekicks Soccer Complex, Norfolk
- ◆ ForeKicks Soccer Complex, Taunton
- ◆ Global Premier Soccer Complex
- ◆ Greensboro College
- ◆ Hampden-Sydney College
- ◆ Lewis & Clark College
- ◆ Liberty University
- ◆ Long Island University-Brooklyn
- ◆ Loyola Marymount University
- ◆ Lynchburg College
- ◆ Mansfield University
- ◆ Mercer University
- ◆ Midwestern State University
- ◆ Mount Olive University
- ◆ Ohio Northern University
- ◆ Oregon State University
- ◆ Queens University of Charlotte
- ◆ Rutgers Camden University
- ◆ SilverLakes Sports Complex
- ◆ Slippery Rock State University
- ◆ South Dakota State University
- ◆ Stanford University
- ◆ Starfire Sports Complex
- ◆ University of Cincinnati
- ◆ University of Delaware
- ◆ University of Rochester
- ◆ University of San Francisco
- ◆ University of South Dakota
- ◆ University of Tennessee at Chattanooga
- ◆ Virginia Wesleyan College
- ◆ Virginia Youth Soccer Association Headquarters
- ◆ West Texas A&M University
- ◆ Wingate University
- ◆ Young Harris College Soccer



Boston College - Chestnut Hill, MA



Camping World Stadium (Citrus Bowl) - Orlando, FL



Duke University - Durham, NC



Stanford University - Stanford, CA



Virginia Youth Soccer - Fredericksburg, VA



SilverLakes Sports Complex - Norco, CA



BASEBALL INSTALLATIONS

WHAT THEY'RE SAYING!

"Moving to turf was not an easy decision for us and came with a great deal of research. We wanted a surface that would bring harmony to both the offensive and defensive components of the game. AstroTurf's product allowed us the best opportunity to do this without compromising any aspect of our field."

– **Tim Corbin**, Head Baseball Coach, Vanderbilt University

"The look and feel of grass, the encapsulation of the infill, and the speed and play provided by the fiber weight made this the best product for us. I noticed that when I talked to coaches who played on AstroTurf, they talked about why they liked the brand. Coaches who had other types of fields just talked about the field and not the company."

– **Greg Beals**, Head Coach, The Ohio State University

"Having played on nearly every synthetic turf system available, the decision of AstroTurf was an easy one...AstroTurf® feels like grass, looks like grass, and even plays like grass..."

– **Gene Stephenson**, Former Head Coach, Wichita State University

"AstroTurf is the right decision for us at Duke because the surface allows for more practice time leading to increases in player development. Too often on a natural surface, coaches are worried that the surface is too wet, too frozen, or too fragile. We do not have that worry. We hit as many ground balls as we want; run as many agilities as we want; and scrimmage when it best fits our schedule. Our players reap the benefits."

– **Chris Pollard**, Head Baseball Coach, Duke University

"We have a first class facility in Bart Kaufman Stadium and a state-of-the-art playing surface in AstroTurf's Diamond Series. This field allows us to get work done in live situations and not miss valuable practice time. We love the way it plays!"

– **Chris Lemonis**, Head Baseball Coach, Indiana University

"We are thrilled with the outcome of our new playing surface at Greer Field at Turchin Stadium...The look and playability of the field is second-to-none in college baseball."

– **Travis Jewett**, Head Baseball Coach, Tulane University

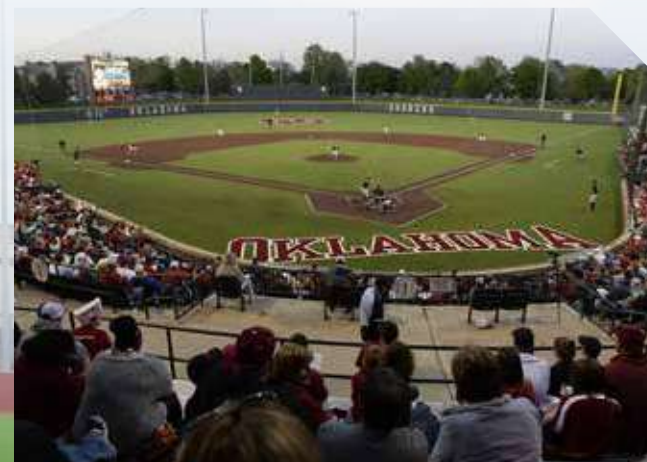
- ◆ Abilene Christian University
- ◆ Ball State University
- ◆ Boston College
- ◆ Dallas Baptist University
- ◆ Duke University
- ◆ Eastern Michigan University
- ◆ Indiana University
- ◆ James Madison University
- ◆ Kansas State University
- ◆ Liberty University
- ◆ Long Island University Brooklyn
- ◆ Northwestern State University
- ◆ Northwestern University
- ◆ Oral Roberts University
- ◆ Sam Houston State University
- ◆ Seattle University
- ◆ Southern Illinois University
- ◆ Southern Illinois University Edwardsville
- ◆ St. John's University
- ◆ St. Joseph's University
- ◆ The Ohio State University
- ◆ Toronto Blue Jays
- ◆ Tulane University
- ◆ University of Delaware
- ◆ University of Iowa
- ◆ University of Kansas
- ◆ University of Michigan
- ◆ University of Oklahoma
- ◆ University of Portland
- ◆ University of Richmond
- ◆ University of San Francisco
- ◆ Vanderbilt University
- ◆ Virginia Tech University
- ◆ Wake Forest University
- ◆ Washington State University
- ◆ West Virginia University
- ◆ Western Kentucky University
- ◆ Wichita State University



Toronto Blue Jays - Toronto, ON



Wichita State University - Wichita, KS



University of Oklahoma - Norman, OK



University of San Francisco - San Francisco, CA



Vanderbilt University - Nashville, TN



Washington State University - Pullman, WA

MULTIPURPOSE INSTALLATIONS

WHAT THEY'RE SAYING!

"We keep coming back to AstroTurf because there's simply no comparison among their industry peers. The University of Delaware has installed a new baseball playing surface, an indoor practice facility, and several multi-use practice fields over the past four years. Each time we get an excellent playing surface, engineered for the demands of the sport, and tailored for our specific project needs."

- **Joe Shirley**, Senior Associate AD of Facilities, Operations and Capital Projects, University of Delaware

"Boys' Latin is continuously striving to provide our students with the best possible resources in all endeavors, sports included. We are confident in our selection of AstroTurf for the new playing surfaces on Smith Field and Coaches Field. The technology behind their products is impressive, and the emphasis on player protection and safety was paramount in our decision-making process."

- **Michael Thomas**, Director of Athletics, Boys' Latin School

"When it came time to replace the turf at Thalassa Stadium, we had some specific ideas in mind. AstroTurf was able to deliver a premium turf system that catered to our needs, and they did so in a timely and professional manner."

- **John Forney**, Chief Facilities Officer, Capistrano Unified School District (San Clemente High School, CA)

"Mulligan field is used by our students for general recreation, intramurals, club sports, and classes, so the durability and playability of the surface was very important in making our decision. For the amount of use the field gets, AstroTurf RootZone was the right choice for us."

- **Rob Kavon**, Assistant Director of Athletics for Facilities and Event Operations, Gonzaga University

"We couldn't be happier with the new turf installation at Buzz Ostrom Stadium. It's not just a replacement field, it's a high performance upgrade that will give our student-athletes a great place to play for years to come."

- **Lucas Moosman**, Athletic Director at Sierra College

- ◆ Adams Five Star School District (CO)
- ◆ Anne Arundel County Public Schools (MD)
- ◆ Appleton School District (WI)
- ◆ Boys' Latin School (MD)
- ◆ Camping World Stadium (FL)
- ◆ Capistrano Unified School District (CA)
- ◆ Chaffey Unified School District (CA)
- ◆ City of Mountain View (CA)
- ◆ Corpus Christi ISD (TX)
- ◆ DePauw University (IN)
- ◆ Duke University (NC)
- ◆ Evangel University (MO)
- ◆ Georgia State University (GA)
- ◆ Gonzaga University (WA)
- ◆ Grand Canyon University (AZ)
- ◆ Kansas State University (KS)
- ◆ Lawrence Technological University (MI)
- ◆ Los Angeles Unified School District (CA)
- ◆ Mercer University (GA)
- ◆ Midwestern State University (TX)
- ◆ Montoursville Area School District (PA)
- ◆ Mt. Diablo Unified School District (CA)
- ◆ New Braunfels ISD (TX)
- ◆ Oregon State University (OR)
- ◆ Paramus Catholic High School (NJ)
- ◆ Penn State University (PA)
- ◆ Refugio High School (TX)
- ◆ Rocky Top Sports World (TN)
- ◆ Scottsdale Christian Academy (AZ)
- ◆ Sierra College (CA)
- ◆ South Dakota State University (SD)
- ◆ Southern Methodist University (TX)
- ◆ St. John Bosco High School (CA)
- ◆ Texas A&M University (TX)
- ◆ Texas Tech University (TX)
- ◆ The Ohio State University (OH)
- ◆ University of Delaware (DE)
- ◆ University of Rochester (NY)
- ◆ University of Tennessee (TN)
- ◆ University of Texas-San Antonio (TX)
- ◆ Utah State University (UT)

Plus 100s more RootZone fields at universities, high schools, and parks across the US.



Ottawa University - Surprise, AZ



Petoskey High School - Petoskey, MI



Shoreline Park - Mountain View, CA



Texas Tech University - Lubbock, TX



Thomasville High School - Thomasville, GA




Wellsboro High School - Wellsboro, PA

WHY YOU NEED TO GET IN THE ROOTZONE



AstroTurf SINCE 1965
powered by **sportgroup**
THE SURFACE SPECIALISTS



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